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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,903	06/23/2003	Parvis Hassan-Zade	P/3239-16	7540

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EXAMINER
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PAIK, STEVE S

ART UNIT	PAPER NUMBER
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2876

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/601,903

Applicant(s)

HASSAN-ZADE ET AL.

Examiner

Steven S. Paik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 4-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-12 and 15-22 is/are allowed.
- 6) ☒ Claim(s) 4-9 and 13 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. Receipt is acknowledged of the Amendment filed October 20, 2005.

***Claim Rejections - 35 USC § 112***

2. Regarding claims 4-9, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). The examiner respectfully suggests deleting the phrase in order to place the patent application in a more appropriate form. Dependent claims 5, 6, and 9 are also rejected due to their dependent relationship with claims 4 and 8 respectively.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chung (US 2002/0044096A1) in view of Wiklof et al. (US 6,147,604).

Re claims 8 and 13, Chung discloses an apparatus for identifying a plurality of items (40) each of which has a radio frequency transponder (44; RF tag, smart card, or an RFID tag), which apparatus comprises a conveyor for conveying the items ([0020], a three dimensional radio frequency antenna (antenna array 30 includes a plurality of loop antennae 31-34 producing a three-dimensional electromagnetic field within a passage 25) positioned on one side of the conveyor, the conveyor having a movable part (such as a belt) for moving the items (objects 40)

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into and out of the antenna (along the direction of an arrow 42) such that the items when in the conveyor are completely surrounded by the antenna (Figs. 2-4) and a reader (processor 50 includes a conventional RF card reader/writer; [0038]) for sending interrogation signals to the transponders via the antenna and for reading identification information from the transponders ([0039]-[0040]). The radio frequency transponder (44) further comprises a housing (44 is a wireless article), a substrate within the housing ([0025]), a printed circuit board mounted on the substrate ([0041]), an integrated circuit (electronic device 48) mounted on the substrate, and a coil (46) mounted on the substrate such as to be spaced therefrom.

However, Chung does not explicitly disclose an encapsulant encapsulating the substrate, the printed circuit board, the integrated circuit chip and the coil, the spacing of the coil from the substrate enabling the encapsulate to completely surround the coil.

Wiklof et al. disclose an RF tag (42) comprising an antenna (18), an integrated circuit (20), and a substrate (12). The tag further comprises an encapsulation 44 surrounding the antenna, IC and substrate to provide mechanical, thermal, and/or electrical protection to the various electronic components of the RF tag (col. 6, ll. 17-60).

In view of Wiklof et al., it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to further employ an encapsulation in addition to the RF tag of Chung due to the fact that more reliable and sturdy RF tags can be manufactured using the protection provided by the encapsulation for the purposes of increasing the life of the RF tags and improving reliability of radio communication between the RF tags and a RF tag reader.

***Allowable Subject Matter***

5. Claims 10-12 and 15-22 are allowable.

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6. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the prior art of the record discloses, teaches, or fairly suggests a distance between turns of coils increase when approaching the respective axis. The prior art of the record is also silent about a plurality of cylindrical antenna coils arranged within one another in a nested relationship having some of the coils being wound such that horizontal magnetic fields phase shift at 180 degrees and 90 degrees maybe generated, and others of the coils being wound such that vertical magnetic fields with phase shifts of 180 degrees may be developed.

#### ***Response to Arguments***

7. Applicant's arguments, see pages 10-15, filed October 20, 2005, with respect to the rejection(s) of claim(s) 1-22 under 35 U.S.C. § 102 or 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Wiklof et al. (US 6,147,604).


#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven S. Paik whose telephone number is 571-272-2404. The examiner can normally be reached on Monday - Friday 5:30a-2:00p (Maxi-Flex\*).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Steven S. Paik  
Primary Examiner  
Art Unit 2876

ssp